

## ABSTRACT OF THE DISCLOSURE

A composite separator plate for use in a fuel cell stack and method of manufacture is provided. The composite separator plate is polymeric and includes expanded graphite dispersed throughout the polymeric material. The expanded graphite provides an electrically conductive pathway through the separator plate. The method includes the step of dispersing by mixing or sprinkling the expanded graphite in the polymeric material and compressing the expanded graphite while compression molding the separator plate.